

### **REMARKS**

The Examiner is thanked for the thorough examination of the application. No new matter is believed to be added to the application by this Amendment.

### **Status Of The Claims**

Claims 1-5 are pending in the application. Support for the amendments to claim 1 can be found in paragraphs 0015, 0036, 0040, 0042 to 0040 and 0053 of the specification. Claims 2-5 have been amended to reflect the amendments to claim 1.

### **Rejection Under 35 U.S.C. §103(a) Over Molitor and Hamada Or Kikuchi**

Claims 1-5 are rejected under 35 U.S.C. §103(a) as being obvious over Molitor (U.S. Patent 4,650,193) taken alone or in view of either Hamada (U.S. Patent 4,929,678) or Kakiuchi (U.S. Patent 4,683,257). Applicant traverses.

### **The Present Invention And Its Advantages**

The present invention pertains to a novel golf ball that has high rebound characteristics. The present invention, as is typically set forth in claim 1, has the following characteristics:

(I) the golf ball has a core formed by vulcanizing and press-molding a rubber composition and at least one layer of a cover covering the core,

(II) the rubber composition contains a base rubber, a co-crosslinking agent, an organic peroxide, a filler and a processing aid,

(III) the base rubber includes a polybutadiene (a) containing a cis-1,4 bond of not less than 80% and synthesized using lanthanide-containing catalyst,

(IV) the organic peroxide comprises an organic peroxide having 10 hours half-life period temperature of 80 to 100 °C,

(V) the processing aid is fatty acid ester, fatty acid salt or the mixture thereof, and

(VI) the core has a center hardness in JIS-C hardness of 50 to 70, a surface hardness in JIS-C hardness of 70 to 90 and a hardness difference (B-A) between the surface hardness (B) and the center hardness (A) of 15 to 28.

Moreover, the rubber composition of the golf ball of the present invention has the following advantages:

(i) high rebound characteristics are accomplished by using polybutadiene synthesized using lanthanide-containing catalyst as a base rubber,

(ii) the processability degraded by the polybutadiene synthesized using lanthanide-containing catalyst is improved by using a specified processing aid,

(iii) since it is difficult to obtain a core or golf ball having hardness distribution such that the outer portion is hard and the inner portion is soft in the case of using the polybutadiene synthesized using lanthanide-containing catalyst and vulcanizing under conventional conditions (high temperature vulcanization at 150 to 170 °C), the core or golf ball is made at low temperature vulcanization conditions (100 to 130 °C), and

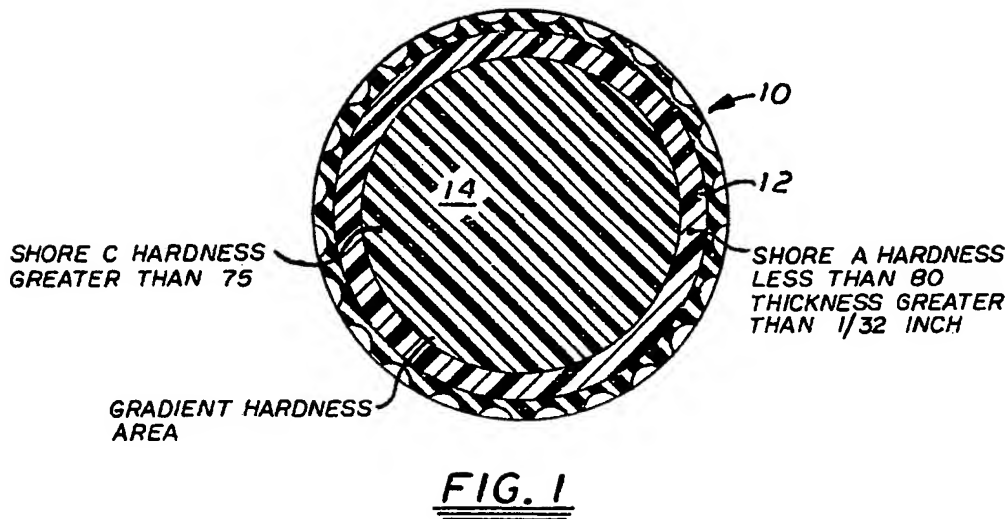
(iv) the same vulcanization degree is obtained at the low temperature vulcanization conditions for about the same vulcanization time as the high temperature vulcanization, and a core or golf ball having a hardness distribution such that the outer portion is hard and the inner portion is soft is obtained by using the organic peroxide (10 hours half-life period temperature of 80 to 100 °C) decomposable at a lower temperature than the temperature at which the conventional organic peroxide decomposes (see paragraph 0014 of the specification).

In the present invention, it is thus possible to obtain a golf ball having good processability, excellent rebound characteristics and excellent durability by using the inventive rubber composition for the core.

*Distinctions Of The Invention Over The Cited Art*

Neither Molitor nor Hamada nor Kakiuchi discloses or suggests the center hardness, surface hardness and hardness difference (B-A) between the surface hardness (B) and the center hardness (A), i.e., feature (VI) above.

Molitor pertains to a two-piece golf ball. The golf ball configuration and hardness of the Molitor golf ball is shown in Figure 1 of Molitor, which is reproduced below.



In Molitor, the central portion of the core has a Shore hardness difference (B-A) of greater than 75, and the other layer integral with and disposed radially outwardly from the central portion has a Shore A (JIS-A) hardness of less than 80 (JIS-C hardness of less than 37). Therefore, the feature (VI) is neither disclosed nor suggested by Molitor.

Also, the center hardness, surface hardness and hardness difference (B-A) between the surface hardness (B) and the center hardness (A) are neither disclosed nor suggested in Kakiuchi or Hamada. As a result, Kakiuchi and Hamada each fail to address the deficiencies of Molitor in suggesting claim 1 of the present invention. A *prima facie* case of obviousness has thus not been made. Claims depending upon claim 1 are patentable for at least the above reasons.

This rejection is overcome and withdrawal thereof is respectfully requested.

**Information Disclosure Statement**

The Examiner is thanked for considering the information Disclosure Statement filed February 25, 2003 and for making the initialed PTO-449 form of record in the application in the Office Action mailed September 9, 2005.

**Foreign Priority**

The Examiner has acknowledged foreign priority in the Office Action mailed October 3, 2005.

**Conclusion**

The Examiner's rejection has been overcome, obviated or rendered moot. No issues remain. The Examiner is accordingly respectfully requested to place the application in condition for allowance and to issue a Notice of Allowability.

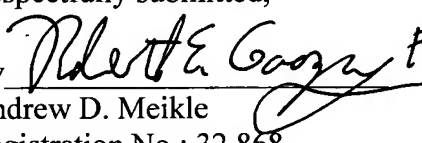
Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Robert E. Goozner, Ph.D. (Reg. No. 42,593) at the telephone number of the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

Pursuant to 37 C.F.R. §§ 1.17 and 1.136(a), Applicant(s) respectfully petitions for a two (2) month extension of time for filing a reply in connection with the present application, and the required fee of \$450.00 is attached hereto.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37.C.F.R. §§1.16 or 1.14; particularly, extension of time fees.

Dated: March 3, 2006

Respectfully submitted,

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